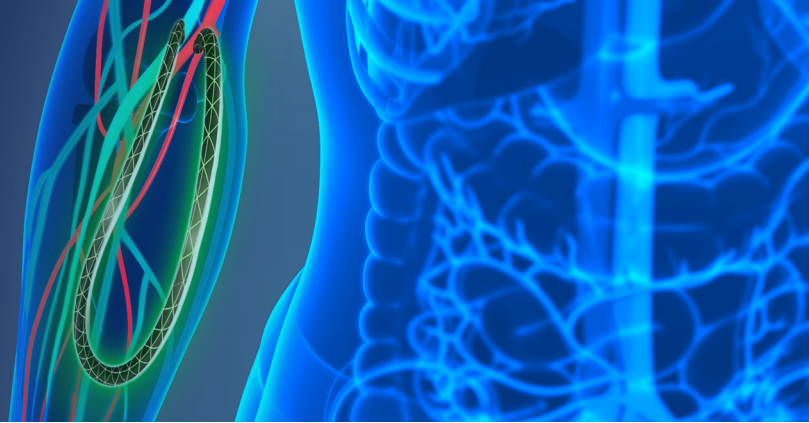




Enhanced Antimicrobial

BioInteractions Surface Active System



TridAnt® Enhanced Antimicrobial Surface-Active Therapeutic

TridAnt® Enhanced Antimicrobial Surface-Active Therapeutic is a zero-leaching, permanently effective coating that reduces blood stream infections, prevents biofilm and colonisation, and minimises the need for antibiotics.

Clinical Features



Contact Kill Mechanism



Full Spectrum Efficacy



Prevents Biofilm Formation



Zero Leaching



Permanently Effective



No Particulates

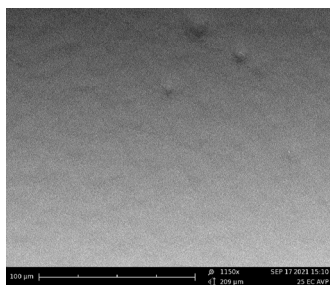
"For many clinicians and patients, the benefits of surface-active medical coatings remain largely unknown.

"By preventing infections, by way of an example, these coatings address one of the most serious risks associated with dialysis catheter use: bloodstream infections.

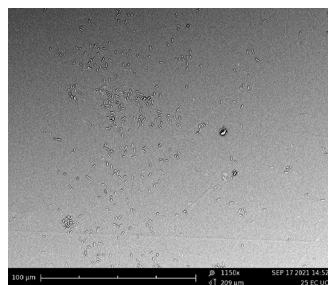
Providing long-lasting, site-specific antimicrobial protection—without the need for systemic drugs—has the potential to transform how vascular access is managed in dialysis. This technology offers safer and more sustainable options for patients using central venous catheters (CVCs)."

Nicholas Inston, President-Elect of the Vascular Access Society and Consultant Surgeon in Vascular Access & Transplantation at Queen Elizabeth Hospital Birmingham

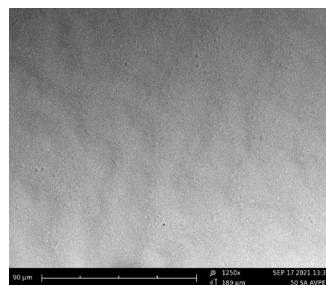
Biofilm of S.aureus and E.coli



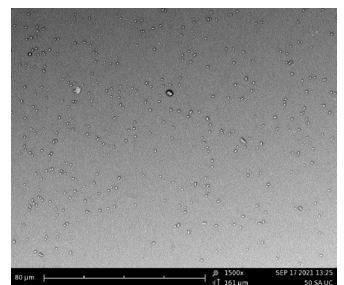
Coated (E.coli) biofilm



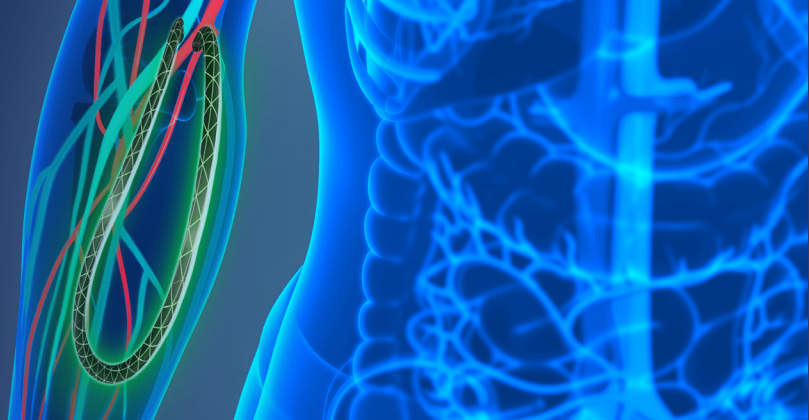
Uncoated (E.coli) biofilm



Coated (S.aureus) biofilm



Uncoated (S.aureus) biofilm



TridAnt Antimicrobial SAT

Bacterial Test Strain	Contact time (seconds)	Log reduction (dirty conditions)
E. hirae	30	4 > log
E. coli	30	4 > log
P. aeruginosa	30	4 > log
S. aureus	30	4 > log
Drug Resistant Bacterial Test Strain	Contact time (seconds)	Log reduction (dirty conditions)
Acinetobacter baumannii (multi-drug-resistant)	30	4 > log
Enterococcus faecalis (vancomycin-resistant)4	30	> log
Escherichia coli (carbapenem-resistant)	30	4 > log
Klebsiella pneumoniae (ESBL)	30	4 > log
Yeast test strain	Contact time (seconds)	Log reduction (dirty conditions)
Candida albicans	30	4 > log

What is TridAnt®?

TridAnt® Enhanced Antimicrobial is a Surface-Active Therapeutic that represents a breakthrough in biocompatible antimicrobial technology. It is the only zero-leaching, permanently effective coating for medical devices that delivers fast-acting, full-spectrum efficacy against gram-negative (e.g. E. coli) and gram-positive bacteria (including drug resistant bacteria, e.g. MRSA), yeast and fungi.

TridAnt® combines active and passive components to inhibit protein deposition and bacterial adhesion while killing pathogens, providing complete protection for medical device surfaces. Its unique Contact Kill Mechanism, which works within seconds, and its permanent efficacy, enables all coated surfaces to function as disinfection for as long as they remain in the body.

TridAnt® offers numerous benefits, both to patients and their doctors. From the patient's perspective it enhances

safety and quality of life. Infection-related complications are reduced, and surgical removals/replacements minimised. Because the devices are safeguarded against infection, implants can remain in place safely, indefinitely.

From the clinician's point of view, this coating delivers sustained antimicrobial protection for decades. The combination of active and passive components inhibits protein deposition and bacterial adhesion on surfaces, and prevents microbial colonisation and biofilm formation, while killing pathogens.

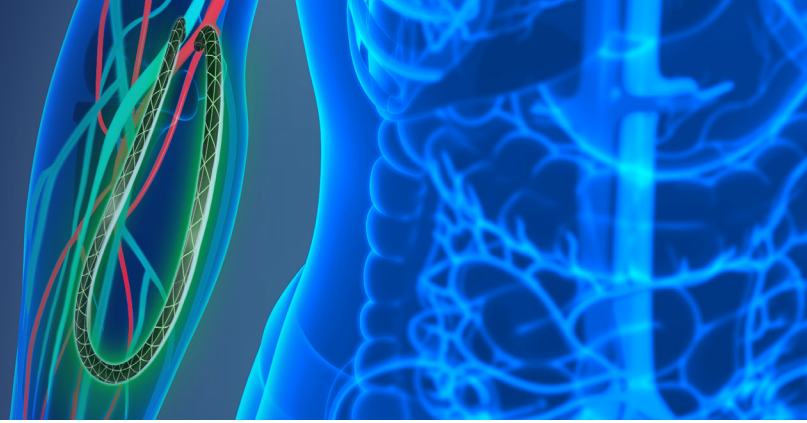
Even in a high-risk environment, or where the patient has an active infection, the coating functions as disinfection for as long as the device remains in the body.

The reduced need for surgical removal or replacement reduces the overall clinical and economic burden of infection management.

TridAnt

Enhanced Antimicrobial

BioInteractions Surface Active System



Biocompatibility Evaluation

TridAnt® Enhanced Antimicrobial Surface-Active Therapeutic is derived from our proven technology platform, used for over 25 years on FDA-and CE-approved medical devices without rejection or recall. It has been tested to ISO biocompatibility standards, including:



Antimicrobial Coating Technologies: Comparison

Technology Type	Quick Kill (On-Contact)	Spectrum of Efficacy	Sustained Efficacy	Safety	CRBSI / BSI Evidence
TridAnt® / Certofix® Protect	Immediate kill; no survival at day 7 (MRSA, E. coli, Pseudomonas, Candida)	Full Spectrum & biofilm with low concentration (MRSA, E. coli, Pseudomonas, Candida)	Lifetime efficacy; no resistance	No systemic effect	RCT: 2.0% vs 6.5% BSI; 70% reduction
Noble Metal Alloy	Galvanic antimicrobial effect; slower, less direct	Broad spectrum is concentration dependant	Claimed non-leaching; some debate on ion release	Systemic effect of toxic metal ions that remain in the body	~49-52% reduction; smaller, variable studies
Eluting Antibiotics	No; relies on diffusion; lag & resistance risk	Limited spectrum is dependant on active ingredient	Finite elution; weeks-months	Systemic effect & risks toxicological dose	Strong efficacy; OR -0.18 vs CHX/SS
Eluting Antiseptic + Silver (CHX/SS)	No; diffusion dependent	Limited spectrum and can develop resistance to antibiotics	Finite elution; wanes with time	Systemic effect & risks of resistance and allergic reactions	Some efficacy; weaker vs antibiotic coatings
Silver or Antibiotic Leaching Coatings	No; elution dependent	Broad spectrum is concentration & silver form dependant	Finite release; declining activity	Systemic effect of metal ions that remain in the body	Variable efficacy; inconsistent
Nitric Oxide Releasing Surfaces	Some fast activity via NO flux	Broad spectrum is concentration dependant	Short-lived; limited duration	Systemic effect of toxicological dose	Promising pre-clinical; limited clinical data



Clinical Applications

TridAnt® can be safely applied to a wide range of medical device substrates, including polymers (e.g. polycarbonate and polyurethane), metals (e.g. nitinol and stainless steel), and woven or non-woven fabrics. It is compatible with diverse geometries and sizes from small implants with an inner diameter of less than 5 microns to large systems with a length of over 20 meters.

Clinical Areas



Orthopaedic



Respiratory



Urology



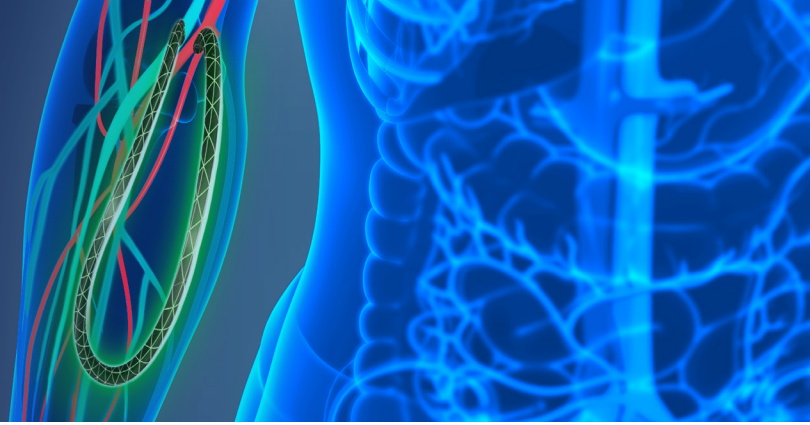
Wound Care



Cardiovascular



Gastrointestinal



Various Substrates We Coat

Hardest	PTFE or Teflon (Polytetrafluoroethylen Polytetrafluoroethylene). Polymer used for sheaths.	ePTFE (expanded polytetrafluoroethylene). Used for stent coverings, vascular grafts, heart valves, surgical meshes	Pebax® (thermoplastic elastomer (TPE). Elastomer
	PEEK (Polyether Ether Ketone). Polymer	UHMWPE (Ultra High Molecular Weight Polyethylene). Polymer.	
	Titanium . Polished Metal	Stainless Steel (chromium, nickel, and molybdenum). Polished Metal alloy	
	Nitinol (nickel-titanium). Polished Metal alloy		
	Silicone (polydimethylsiloxane). Polymer	Silicone rubber. Elastomer	Nylon (Polyamide). Polymer
	PP (Polypropylene). Polymer used for catheters, thin films	PVC (Polyvinyl chloride). Polymer	TPU (thermoplastic polyurethane). Elastomer
	PET (polyethylene terephthalate). Polymer sheets	PP (polypropylene), PET (polyester), and PE (polyethylene). Non-woven fabric (sutures, face masks, textiles)	PE (Polyethylene). Polymer.
	SEBS poly(styrene-block-ethylene /butylene-blockstyrene). Polymer	SEPS poly(styrene-block-ethylene /propylene-blockstyrene). Polymer	Cellulose Fibres (biopolymer)
		PET (polyethylene terephthalate). Fibres are spun and then woven Polyester fabric. Woven fabric	PC (Polycarbonate). Polymer
			Cotton (biopolymer)
Easiest			PMP (Polymethylpentene). Hollow polymer fibres